

Patent Abstracts of Japan

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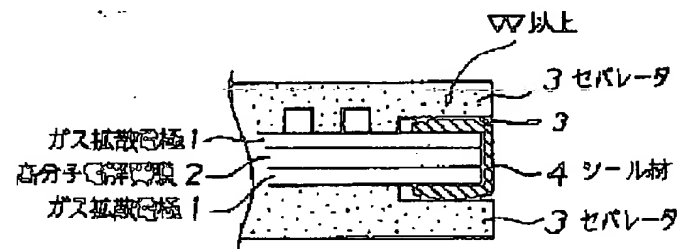
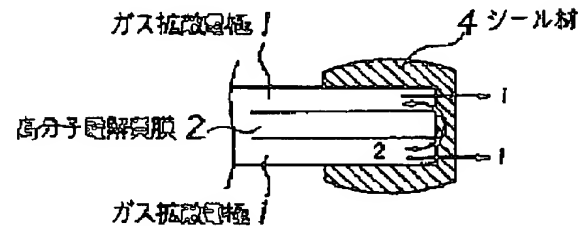
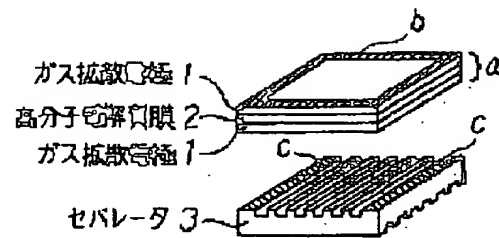
APPLICATION DATE : 07-10-91
APPLICATION NUMBER : 03259150

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TITLE : SEAL STRUCTURE OF FUEL CELL



ABSTRACT : PURPOSE: To eliminate gas leakage at the end of an electrode by forming each unitary cell of a fuel cell from a high polymer electrolyte and gas diffusion electrodes pinching it, and furnishing this unitary cell with a resilient sealing member having a high electric insulation embodied in such a form as enwrapping in a single piece the cell end faces and the oversurface and undersurface of each cell end, and with a separator having a sealing surface in contact with the sealing member.

CONSTITUTION: A resilient sealing material 4 having electric insulation such as a sealant of silicon rubber type is applied in a single piece to the top and bottom faces (b) of each unitary cell and the end faces (a) of a gas diffusion electrode 1, a highpolymer electrolyte film 2, and again a gas diffusion electrode 1, followed by drying process. Thus gas leakage at the end of the electrode 1 is prevented, and also cross-leak due to mixing of the fuel with oxidating agent is eliminated by good adhesion with the film 2. Those portions (c) of sealing material 4 and separator 3 in contact with it which require sealing are equipped with a surface smoothness more than required to keep a sealing performance, and leak generation is eliminated even between the cell and separator 3.

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